This, the fifth year of New Knowledge Organization Ltd., was a time of productivity and growth. Building on a track record of mission-driven success, we enjoyed both renewed and new partnerships that generated important learning around the facilitation of healthier ways of living, more effective ways of effecting behavior change, and important stewardship action for our planet. With diverse projects and challenging research questions, there was certainly never a dull moment in our team’s work!

After several years of rapid growth, it was an appropriate year for the logistical and business sides of the organization to review and improve systems and policies to reflect the increased size and activity level of the group. With 100% Board giving, a new Fundraising Committee, and the development of new materials to raise overhead funding, NewKnowledge became poised to reach out for financial support in a professional manner.

As Chair of the hardworking and responsible volunteer Board of NewKnowledge, I am inordinately proud of the work we have accomplished, and confident 2017 will be an exciting and fruitful year.
We celebrated our fifth year in 2016. To mark the anniversary, we stood back to reflect on our founding mission. The transformation from start-up to established non-profit was swift. Our fifth year was an opportunity to think again about our strategic plan: what worked, what required revision, and where we might refine our goals. We were pleased to realize we achieved many of the goals we set in our 2012 strategic plan.

As we examined our work, we realized that our commitment to scholarly pluralism had built an amazing team with capacity to take on much larger projects than we imagined at founding. With that in mind, our entire staff convened over a period of six months to update our strategic plan. We focused on how to magnify our successes and opportunities, and how to restructure business practices for growth. By year-end our new strategic plan was adopted and is now reflected in this annual report.

As you’ll see in the following pages, we’re now a mature research organization working side-by-side with peers founded decades ago. The selections in this report provide an overview of how our four pillars are advancing wellness, promoting public engagement in protection of the biosphere, supporting cultural actors as they shape a more inclusive society, and providing timely information on how media is changing the way we perceive our world.
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Goal 1 | Be Critical Thinkers

Challenge the status quo by analyzing, assessing, and reconstructing ideas about social challenges, turning them into actionable research questions. Through rigorous, self-aware, and flexible habits of mind, engage with the mechanisms that can produce social change solutions.

One of the hallmarks of our work is our nimble and flexible approach to research. In 2016, we recognized the value of this capability for several short-turnaround projects, where our team of researchers quickly activated around complex studies. NewKnowledge had the skill and adaptability to respond to challenging research questions and demanding data collection scenarios. After our yearlong effort to refine our strategy, we saw how central this aspect of our work had become to the NewKnowledge approach.

For instance, we worked with the Rhode Island Environmental Education Association, Rhode Island Department of Education, and a host of environmental education experts on measuring environmental literacy in youth. Within several months of a planning summit, we produced a three-year strategy for implementing an assessment plan for an initiative to achieve comprehensive environmental literacy among high school graduates across the state.

Critical Thinking Spotlight: Assessing the Value of Publishing for Kids

We began a collaboration with National Geographic Education and Kids Media to understand the impact of publications on young people’s attitudes, skills, and knowledge. From late 2015 to early 2016, we responded as a community of thinkers to explore this question in metropolitan and suburban areas across California, Illinois, Indiana, and New York. Drawing on our expertise in media and developmental psychology, NewKnowledge’s research team and three Research Fellows worked together closely to collect data, analyze the results, and produce several publications to address the research questions.

We reviewed 36 books and magazines from National Geographic’s Education and Kids Media publications.
The result? We helped National Geographic articulate the value of their print product in equipping children to be explorers with intrinsic interest in diverse topics, and parents and educators to be supporters in young people’s learning endeavors. Only through thinking together as an interdisciplinary team of researchers were we able to quickly explore National Geographic’s research questions. The success of this study then sparked another research initiative with National Geographic, where we explored the geospatial learning impacts of their state giant maps program.
Goal 2 | Develop Purposeful Partnerships

Collaborate with change-makers who have the ability and potential to tackle deep societal issues. Partner with scholars whose ideas can help make that change possible.

We worked with 36 partners across North America and Europe in 2016. While we are proud of the breadth of this work, this year we reflected on the depth of these collaborations. In the five years since our founding, NewKnowledge has built several longstanding relationships with change-makers in multiple fields. In 2016, we hit our stride with several partnerships, which enables us to ask tough questions, interrogate assumptions, revisit the data, and sustain ongoing conversations with program leaders how to leverage research towards better solutions to our society’s greatest challenges. As one partner put it, NewKnowledge “holds their feet to the fire” so our partners do better work.

Purposeful Partnership Spotlight: Boston Change-Makers

This year, we recognized the opportunities in and value of deep partnerships with two change-making organizations in particular. Since our founding in 2012, we have worked with these very different partners: the New England Aquarium and the Educational Gaming Environments (EdGE) group at TERC. Both located in the Boston area, the Aquarium and EdGE are leaders in informal, lifelong learning with national reach. We are proud that our New York City-based think tank has become an integral partner to these organizations’ research, programs, and strategy.

For Leveling Up, NewKnowledge studied three games: Ravenous, a game that explores animal behavior and energetics; Impulse, a game about physics; and Quantum Spectre, where players think about optics.
EdGE at TERC, which specializes in designing and studying free-choice STEM learning digital games, invited NewKnowledge to be the evaluator on Leveling Up, an NSF-funded program aimed at studying how social digital games played outside of school can be used to support and measure teens’ STEM learning. Over the course of five years, we collaborated with EdGE’s team of designers and researchers to conduct two national studies of teens’ gaming preferences, identity, and STEM learning. We published that work in peer-reviewed journals to help EdGE push their work further. In the meantime, we’ve become EdGE’s go-to research partners for other initiatives funded by the National Science Foundation.

For SportsLab:2020, we worked with EdGE to research design strategies for a digital collaboration space that will host design challenges for sports equipment, such as parkour sneakers. EdGE also asked our team to collaborate on studying the learning impacts of Zoombinis, an award-winning online logic game for kids.

Across Boston, on the harbor, New England Aquarium is a fun learning destination for visitors of all types. The Aquarium also strives to be a global leader in education and public engagement. We’ve been proud to be a core part of the Aquarium’s strategic initiatives. Since 2012, we’ve worked with the Aquarium and other science and communication experts to design and rigorously assess the National Network for Ocean and Climate Change Interpretation (NNOCCI). With the lack of federal leadership on climate change resilience in 2016, we’ve been re-energized about our work supporting this network’s effort to build the capacity of educators and early career scientists to productively communicate about climate change, and sustain those individuals’ endeavors in a community of practitioners. Since we began working on NNOCCI, the Aquarium has invited us to join other initiatives, like a study of visitor engagement strategy and Visualizing Change, related to our strategic goal of advancing public discourse. The Aquarium has named NewKnowledge researchers on proposals for federal grants developed in 2016 as well.

As of 2016, NNOCCI has trained over 400 educators and scientists to productively communicate about climate change with a wide range of audiences. Photo © NNOCCI
Since our founding, pluralism has been our priority. We strive to both build a diverse team and promote pluralistic principles in our work with change-makers. We are proud that our team of 33 staff and Research Fellows represents over a dozen academic disciplines ranging from conservation psychology, ecology, and library and information services, to human rights research.

In 2016, we were thrilled to expand our health and wellness research practice with the addition of Hiershenee Bhana, a doctoral candidate who studies health promotion and nutrition education. Our work with Ms. Bhana also supported the American Evaluation Association’s Graduate Education Diversity Intern initiative, which engages students from groups traditionally underrepresented in the field of evaluation.

Pluralism Spotlight: Making the Case for Pluralism in the National Climate Assessment

This year’s research pushed our thinking on representation in large-scale initiatives. In early 2016, we were asked to serve on the evaluation team for the third National Climate Assessment (NCA3), a federal study and report led by scientists and leaders, mandated to occur every four years. With the evaluation commissioned by the National Oceanic and Atmospheric Administration, North Carolina State University, and the US Global Change Research Program, we were asked to study the development of the NCA3 report and its impacts with two collaborating evaluators.

Inspired by the ambitious nature of the National Climate Assessment program, we undertook an expansive evaluation of the collaborative report development process, in-depth interviews, focus groups, and a survey with report planners and writers, analyses of the report website’s backend usage data, and surveys of members of the public who were potential users of the report. We also analyzed how the report had been cited in academic literature to understand its value for scholars and researchers.

We found that the report development process featured collaboration among a wide range of scientific disciplines, with a multidisciplinary group working collaboratively on each chapter of the report and helped the developers build their scholarship.

Goal 3 | Nurture Pluralism

*Invest in a pluralistic NewKnowledge community with broad academic, life, and work experiences that contribute diverse perspectives to the problems we explore. Support the personal and professional growth of our entire learning community.*
Despite the wealth of scientific perspectives involved in NCA3, we found the report production and its impacts were limited to academic and scientific communities. Data gathering, report preparation, and promotion focused on scientists and political groups did not include other sectors, such as corporate and business leaders, educators, Indigenous groups, community leaders, and others. In sum, the report creation lacked a pluralistic process to reflect the diversity of our nation's cultures, commerce, and education activities.

NewKnowledge and our evaluation partners Dantzker Consulting, LLC and Mimi Shah later presented these results to policy makers, federal employees, and institutional leaders at a meeting of the Advisory Committee for the Sustained National Climate Assessment in the Washington, DC area. Receiving a warm response to the talk, colleagues related that our work helped them consider how to prioritize pluralistic processes in their work. We are proud that this work will affect future National Climate Assessments and how leaders in policy, education, and science think about their practices.

The NCA3 Report was published as an interactive website: nca2014.globalchange.gov. (Screenshot of NCA3 website.)
Communicating about research is a core part of NewKnowledge, one that sets us apart from other research organizations. As part of our new strategic plan, we redefined the dissemination goal as helping change-makers leverage research to create transformative solutions to society’s grand challenges. This new objective changed how we approached project reporting and communication.

This year we became the editorial office for *Curator: The Museum Journal*, the most highly indexed peer-review journals in the museum field. With President & CEO John Fraser named Editor, and Communications Manager Kate Flinner as an Associate Editor, we incorporated this new venture into our goal of advancing public discourse around how learning institutions contribute to the wellbeing of our society. We also experimented with newsletters to share our portfolio of projects and partnerships. We tested short newsletters with board and staff, and a dedicated monthly newsletter for educators who follow our studies on classroom learning. Based on the success of these experiments, we launched a monthly newsletter for a circle of over 400 people: partners, friends from other organizations, colleagues in research, funders, and more. Alongside our print publications and social media feed, these communications are reaching more change-makers working to enable all people to live to their potential in harmony with a thriving biosphere.

**What’s Happening**

July 19, 2016

Inspiration from environmental leaders and citizens using peaceful dialogue

We have been deeply troubled by the violence and mistrust we’ve seen across our country and the world in recent weeks. But an inspiring post by the Sierra Club’s Executive Director, Michael Brune, has reminded us the importance of working toward our mission. Through supporting environmental and social justice initiatives, we hope to build respect and love across society so that all people — especially society’s most vulnerable — can live to their full potential. [Read Michael’s post here.]

We’re pleased to share the final video from Streamlines, which aims to support science learning with art across Indianapolis. This new media piece illustrates the importance and pervasiveness of water, as dancers interpret the watershed where people of Indy live.

NewKnowledge’s What’s Happening email newsletters were short and accessible.

59 partner research publications

28 newsletters for 400+ readers

302 social media + web posts

10 presentations
Public Discourse Spotlight: Assessing & Mobilizing Communications Tools for Educators

This year we explored the complexity of media and visualization technology and how to spread the use of that technology with Visualizing Change, an initiative funded by the National Oceanic and Atmospheric Administration. We worked with a team of educators, climate scientists, linguists, and data visualization scientists to understand how visual storytelling tools could increase the capacity of informal science learning institutions to communicate climate science data and increase STEM learning among the public with an emphasis on collective action toward solutions.

We worked alongside educators from informal STEM learning institutions as they collaboratively developed content for four visual narratives and then trained other institutions to use those tools. Digital visualization formats became a critical factor in the study: we explored the educator and audience experience of these tools in Science on a Sphere, Magic Planet, flatscreen, and iPad formats. With evaluation embedded in every step of the development and dissemination process, we were able to investigate digital media formats, institutional use and adaptation of tools in learning centers across the country, and how educators could promote public discourse with clear communication tools. As a result, the project team was able to package the media tools and guides for open access use on the www.VisChange.org website. With educators and interpreters as our target audience, this initiative advanced our thinking on how data-driven processes and products support confidence-building, a critical factor in equipping communicators to pursue evidence-based solutions.
Goal 5 | Cultivate Financial Stability

*Develop a stable, resilient funding scheme and work process able to ensure the longevity and sustainable fiscal health of the organization. Maintain ongoing vulnerability assessments, refine policies, and monitor growth strategies.*

We are one of the nearly 42,250 non-profit 501(c)(3) charitable organizations in the US with operating revenues between $1MM and $5MM filing federal 990 reports on our work. The Urban Institute estimates that together, we represent 14.4% of the entire non-profit sector. The average growth in the sector has remained consistent at around 2.3% over the cost of living. In 2016, our financial reports demonstrate a 10.1% increase in contract revenue, which places us well ahead of our peer organizations.

Our growth over the past few years has been increasingly represented by one-year contract revenue from work with other non-profits, a swing in financial support from our early work that relied primarily on federal funding. This growth in diverse funding sources is helping us maintain a larger and more flexible team. We end our fifth year with a positive financial balance and a healthy operation moving into our sixth year.

Sources of revenue.

Distribution of originating federal funds.
Statement of Financial Position

Year ended December 31, 2016, 2015, and 2014

<table>
<thead>
<tr>
<th>Assets</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$85,674</td>
<td>$12,112</td>
<td>$15,045</td>
</tr>
<tr>
<td>Contract service fees receivable</td>
<td>183,644</td>
<td>207,268</td>
<td>185,630</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>5,963</td>
<td>2,103</td>
<td>4,000</td>
</tr>
<tr>
<td>Security deposit</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Furniture, equipment &amp; leasehold improvement</td>
<td>6,314</td>
<td>14,504</td>
<td>22,694</td>
</tr>
<tr>
<td></td>
<td><strong>$ 296,595</strong></td>
<td><strong>$ 250,987</strong></td>
<td><strong>$ 242,369</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable and accrued expenses</td>
<td>$50,597</td>
<td>$56,427</td>
<td>$68,124</td>
</tr>
<tr>
<td>Advance payable</td>
<td>—</td>
<td>17,854</td>
<td>—</td>
</tr>
<tr>
<td>Loan payable</td>
<td>775</td>
<td>54,288</td>
<td>26,703</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>36,021</td>
<td>23,700</td>
<td></td>
</tr>
<tr>
<td>Total Liabilities</td>
<td><strong>$87,393</strong></td>
<td><strong>$152,269</strong></td>
<td><strong>$94,827</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Assets</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrestricted</td>
<td>209,202</td>
<td>98,718</td>
<td>147,542</td>
</tr>
<tr>
<td></td>
<td><strong>$ 296,595</strong></td>
<td><strong>$ 250,987</strong></td>
<td><strong>$ 242,369</strong></td>
</tr>
</tbody>
</table>
### Statement of Activities

Year ended December 31, 2016, 2015, 2014

#### Revenue and Support

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract service fees</td>
<td>$1,171,520</td>
<td>$1,048,537</td>
<td>$1,045,716</td>
</tr>
<tr>
<td>Contributions in-kind</td>
<td>8,300</td>
<td>21,425</td>
<td>31,457</td>
</tr>
<tr>
<td>Contributions</td>
<td>13,876</td>
<td>8,993</td>
<td>6,816</td>
</tr>
<tr>
<td>Other income</td>
<td>65</td>
<td>4,735</td>
<td>1,234</td>
</tr>
<tr>
<td><strong>Total Revenue and Support</strong></td>
<td><strong>1,193,761</strong></td>
<td><strong>1,083,690</strong></td>
<td><strong>1,085,223</strong></td>
</tr>
</tbody>
</table>

#### Expenses

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Services</td>
<td>$764,885</td>
<td>$805,371</td>
<td>$802,587</td>
</tr>
<tr>
<td>Supporting Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management and general</td>
<td>255,572</td>
<td>239,109</td>
<td>169,682</td>
</tr>
<tr>
<td>Fundraising</td>
<td>62,820</td>
<td>78,034</td>
<td>18,850</td>
</tr>
<tr>
<td><strong>Total Supporting Services</strong></td>
<td><strong>318,392</strong></td>
<td><strong>327,143</strong></td>
<td><strong>188,532</strong></td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$1,083,277</strong></td>
<td><strong>$1,132,514</strong></td>
<td><strong>$991,119</strong></td>
</tr>
<tr>
<td>Change in Net Assets</td>
<td>110,484</td>
<td>(48,824)</td>
<td>94,104</td>
</tr>
</tbody>
</table>

#### Net Assets

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of Year</td>
<td>98,718</td>
<td>147,542</td>
<td>53,438</td>
</tr>
<tr>
<td><strong>End of Year</strong></td>
<td><strong>$209,202</strong></td>
<td><strong>$98,718</strong></td>
<td><strong>$147,542</strong></td>
</tr>
</tbody>
</table>
Distribution of Audited Functional Expenses.

Change in funding support by originating source of funds.
The 2016 NewKnowledge Team

Staff

Nezam Ardalan, M.A., Researcher
Lynn Battaglia, M.A., Accounting Manager
Joanna Laursen Brucker, Project Manager
James Danoff-Burg, Ph.D., COO/Researcher *
Jennifer Dixon, Librarian
Kate Flinner, M.A., Manager of Communications
John Fraser, Ph.D., AIA, President & CEO
Sophie Gloeckler, Research Associate
Rupu Gupta, Ph.D., Researcher
Susan Hannah, M.Phil, Researcher
Nicole LaMarca, Research Assistant
Rebecca Norlander, Ph.D., Researcher
Shelley Rank, M.A., Researcher
Su-Jen Roberts, Ph.D., Researcher
Christina Shane-Simpson, M.A., Ph.D. *
Laura Tietjen, M.A., Researcher & Administrator
The BAI Group Inc./Tony Zisa, Controller
Hiershenee Bhana, GEDI Research Fellow
Kristina Alnes, Intern
Alex Baer, InternAmberlyn Maxwell, Intern
Molly Reese-Lerner, Library Intern
Sophie Swanson, Intern

Board of Trustees

Judith M. Koke, 2016 – 2018 Board Chair
Carolyn Gray, Director
Marilyn Hoyt, Secretary
Leonard P. Singh, Director, Finance & Audit Committee Member
Paul Boyle, Ph.D., Director
Julia Mair, Director
Wednesday Martin, Ph.D., Director
Andrea Turner, J.D., Director
John Fraser, Ph.D., AIA, President & CEO (ex officio)

Research Fellows

Simon Bird, Ph.D.
James Danoff-Burg, Ph.D.*
Sharon Danoff-Burg, Ph.D.
Elizabeth Danter, Ph.D.
Ed Greene, Ph.D.
Marie Keem, Ph.D.
Kin Kong, Ph.D.
Kenneth Lo, M.U.P.
Brian J. Plankis, Ed.D
Christina Shane-Simpson, M.A., Ph.D.*
Beverly K. Sheppard, M.A.
Shelley Stern, LCSW, Ed.M.

* Two staff transitioned to Research Fellow status at mid-year coincident with receiving academic appointments.
2016 Collaborators & Partners

American Library Association – Public Programs Office
American Alliance of Museums
Amnesty International
Association of Zoos and Aquariums
Brooklyn Historical Society
Butler University – Center for Urban Ecology & Department of Dance
California Environmental Legacy Project
California State University, Sacramento
California Water Service Company
Centers for Ocean Sciences Education Excellence
Children’s National Medical Center
Cleveland Museum of Natural History
Cornell University – Civic Ecology Lab
City University of New York (CUNY) – Dominican Studies Institute & Colin Powell School for Civic and Global Leadership
Curator: The Museum Journal
Dantzker Consulting, LLC
Environmental Protection Agency – EECapacity
FINRA Investor Education Foundation
Humboldt State University – Department of Biological Sciences
Indiana University Purdue University Indianapolis – Center for Urban Health
KOED (Quest)
Mary Miss Studio & City as Living Laboratory
Museum of Science and Industry
National Geographic Society
National Network for Ocean & Climate Change Interpretation
New England Aquarium
New York University Incubators
NOAA Environmental Visualization Laboratory
North American Association of Environmental Education
North Carolina State University
Ocean Connectors
Oregon Zoo
Pennsylvania State University
Poets House
Project Piaba
Reconnecting to Our Waterways, Indianapolis
San Diego Natural History Museum
Tampa’s Lowry Park Zoo
TERC – EdGE: Educational Gaming Environments Group
The Economist
The daVinci Pursuit
The Goods
The Kinetic Project
The Nature Conservancy
The New York Academy of Sciences
UL (Underwriters Laboratories)
University of Michigan – MEERA & School of Natural Resources and Environment
WETA / PBS NewsHour
Wildlife Conservation Society
Publications

PEER-REVIEW & EDITORIAL PUBLICATIONS


REPORTS & GENERAL PUBLICATIONS

EPA.060.064: EECapacity


GOV.133.375 — Integrated Conservation Action Plan


NIH.066.077 — SimLab


NOAA.052.127 — Visualizing Change


NPO.074.175 — Libraries Transforming Communities


NPO.074.306 — ALA Smart Investing


NPO.086.387 — CAS Online Teacher Resources


NPO.087.194 — Cultivating Whole Communities


NPO.087.268 — LEAF 2015-2016


NPO.087.311 — Nature Works Everywhere


NPO.091.355 — CFAF Math


NPO.121.219 — Lowry Park Zoo Interpretation Plan and Capacity Building


NPO.122.364 — Climate Resilience in Urban Campus + Communities


NPO.125.324 — WCS Ocean Planning Project


NPO.132.303 — Teach City

NPO.134.285 — National Geographic Kids Books


NPO.134.365 — Traveling Map


NPO.135.318 — Amnesty International’s Human Rights Education and Youth Campaign Efforts

NPO.141.234 — Rhode Island Environmental Literacy Assessment

NPO. 142.334 — Columbus Zoo


NPO.144.301 — Girl Scouts Vidoce

NSF.051.051 — Leveling Up

NSF.051.213 — Zoombinis

NSF.052.111 — NNOCCI 2


